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AND SPIRIT OF THE AGRICULTURAL JOURNALS OF THE DAY.

"O Fortunatos nimium sua si bona norint
"Agricolas." . . . . *Virg.*

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MANURES:—A PRIZE ESSAY.

By S. L. Dana.

Section First.

Clearing and Breaking up, and Making Compost.

There is one thing settled in farming, stable manure never fails. It always tells. There are no two ways about it. There is here neither theory, nor speculation, nor doubt, nor misgiving. "Muck it well, master, and it will come right," is an old proverb. It is considered a fact so well established, that nobody thinks of disputing it. There is advantage in asking why barn-yard manure never fails. The answer is easy. It contains all that plants need for their growth. If we know then what plants contain, we can easily tell what is in manure. The whole doctrine of manures, then, falls into two plain principles, on which hang all the law and the "*profits*" of agriculture.

1. Plants contain and need certain substances which are essential to their growth.

2. Manure contains all those substances which plants want. If, then, we would find out what it is which manure contains, that makes plants grow, we must find out what a grown plant contains. This cannot be done without some little, a very little knowledge of chemistry. Do not be startled, reader, I suppose that you may know nothing of chemistry, no, not even its terms. As a very sensible man, who wrote letters on Botany to a young lady, said, to encourage his pupil, it was possible to be a very good Botanist without knowing one plant by name, so is it possible to become a very good agricultural chemist, without knowing little more than the chemical names of a very few substances. You know nothing of chemistry it may be, and as little of law; yet you will go to law, and learn some of its terms by a dear-bought experience. The law terms are harder to learn than the chemical terms. Now I fear that some persons, who have followed me thus far, will shut up the book. It is, say they, all stuff, book-farming, and beyond us. If one may not understand what manure is without this learning, we may as well begin where our fathers ended, and that was where our forefathers began ages ago. By a little law, however, picked up as a juryman, or witness, selectman, town-clerk, justice of the peace, yea, perhaps, hearing an indictment read, men do come to understand what a lawyer means when he talks. So, too, by a little chemical talk, a man may learn what a chemist means when he talks of oxygen, hydrogen, nitrogen, chlorine, and carbon; potash, soda, lime, (ah, these are old friends, the very names make us feel at home again,) alumina, magnesia, iron, manganese, and silex, sulphur, and phosphorus. Here is a long list. Long as it is, perhaps it will be thought worth learning, when you are told, that these are the names of all the substances found in plants, every substance which they want. Out of these is made every plant. Every part of every plant, from the hyssop on the wall to the mountain cedar, contains some or all of these. Be not disheartened. Look over, reader, the list again carefully; see how many are old names of things which you know. Of the fifteen, you know nearly one half by name and by nature. These are potash, soda, lime, magnesia, iron sulphur. Perhaps you will add, that you know carbon is coal, or rather coal carbon. You have heard from some travelling lecturer at your town Lyceum, that oxygen and hydrogen together, form water. That oxygen and nitrogen form the air we breathe; that nitrogen and hydrogen form ammonia, or sal volatile, which gives the sharp smell to the smelling-bottle. Besides, the thing has been said so often, that you must have heard it, that chlorine, the substance which bleaches in bleaching salts, united to soda, makes common salt; or if chlorine is united to ammonia, sal ammoniac is formed. Now by changes and combinations among these fifteen things, nature makes everything we find in plants. Many of these are invisible as is the air. The substance called chlorine, perhaps you have never seen, but if you ever smelt it you will never forget it. It is often smelt in a piece of bleached cotton, when opened in the shops. It gives the smell to bleaching powder used to disinfect the air, during cholera and other diseases. If you could see it, it would appear merely a faint yellowish green air. It is all-powerful on vegetation. As it forms a part of common salt, say half of its weight, we may dismiss the further consideration of it, by saying, that, in some shape or other, chlorine is universally diffused in soil and plants.

The list above may be divided as follows: First, the airy or volatile; secondly, the earths and metals; thirdly, the alkalies; fourthly, the inflammables. Only the third and fourth divisions require to be explained or defined. The substances called potash and soda are termed alkalies. They are said to have alkaline properties. Touch your tongue with a bit of quicklime, it has a hot, burning, bitter taste. These are called alkaline properties. Besides these they have the power of combining with and taking the sour out of all sour liquids or acids, that is, the acid and the alkali neutralize each other. This word alkali is of Arabic origin; its very name shows one of the properties. "Kali," is the Arabic word for bitter, and "al," is like our word super, we say fine and superfine; so kali, is bitter; alkali, superlatively bitter, or truly alkali means, the "dregs of bitterness." I wish, reader, for your own sake, as well as my own, that you should fix in your mind what I said about alkali and alkaline properties. Alkali is a general term. It includes all those substances which have an action like the ley of wood ashes, which you use for soap-making. If this ley is boiled down dry, you know it forms potash. Now lime, fresh slacked, has the alkaline properties of potash, but weaker, and so has the calcined magnesia of the shops, but in less degree than lime. Here we have two substances, earthy in their look, having alkaline properties. They are called, therefore, alkaline earths. But what we understand chiefly by the term alkalies, means potash, soda, and ammonia. Potash is the alkali of land plants; soda is the alkali of sea plants; and ammonia is the alkali of animal substances. Potash and soda are fixed, that is, not easily raised in vapor by fire. Ammonia always exists as vapor unless fixed by something else. Hence we have a distinction among alkalies which is easily remembered. This distinction is founded on the source from which they are procured, and upon their nature when heated. Potash is vegetable alkali, derived from land plants; soda is marine alkali derived from sea plants; ammonia is animal alkali, derived from animal substances. Potash and soda are fixed alkalies; ammonia is a volatile alkali. Potash makes soft soap, with grease, and soda forms hard soap. Ammonia forms neither hard nor soft; it makes, with oil, a kind of ointment, used to rub a sore throat with, under the name of volatile liniment. But though there be these three alkalies, and two alkaline earths, I want to fix in your mind, reader, that they all have common properties, called alkaline, and which will enable you to understand their action, without more ado about their chemistry. The inflammables, or our fourth division, are sulphur and phosphorus; both used in making friction matches. The phosphorus first takes fire, by rubbing, and this sets the sulphur burning. Now, the smoke arising from these is only the sulphur and phosphorus united to the vital part of the common air. This compound of vital air, or oxygen, as it is called, and inflammables, forms acids, called sulphuric and phosphoric acids. So if you burn coal, or carbon, it is well known you form fixed air, or carbonic acid. That is, by burning, the coal or carbon unites with the oxygen or vital part of common air, which arises from burning charcoal, has all the properties of an acid. And now let us see what these properties are. All acids unite or combine with the alkalies, alkaline earths, and the metals. When acids and alkalies do thus unite, they each lose their distinguishing properties. They form a new substance, called a salt. It is very important you should fix well in your mind this definition of a salt. You are not to confine your idea of a salt to common salt. That is a capital example of the whole class. It is soda, an alkali, united to an acid, or chlorine, or to speak in the terms the most intelligible, to muriatic acid. So saltpetre is a salt. It is potash united to aqua-fortis. Yet in saltpetre you perceive neither potash nor aqua-fortis. These have united, their characters are neutralized by each other. The have formed a neutral salt. Our list of substances found in plants is thus reduced from things which you did not know, to things which you do know; and so we have saved the trouble of learning more of their chemistry.

We have reduced the airy or volatile into water, formed of oxygen and hydrogen; or volatile alkali, formed of nitrogen and hydrogen; or into acids, as the carbonic, formed of oxygen and carbon—as the sulphuric, formed of oxygen and sulphur—as the phosphoric, formed of oxygen and phosphorus; and having thus got water and acids, these unite with all the alkaline, earthy, and metallic bodies, and form salts. To give you new examples of these I may mention Glauber's salts and Epsom salts. Glauber's salt is formed of soda and sulphuric acid; alum, of alumina, or clay and sulphuric acid; green vitrol, of iron and sulphuric acid; white vitriol, of zinc and sulphuric acid; plaster of paris, of lime and sulphuric acid; bones, of lime and phosporic acid; chalk and limestone, of lime and carbonic acid. These are all examples of salts; that is, an acid, or a substance acting the part of an acid, united to an alkali, metal, or, earth.

We have thus gone over, in a very general way, enough of chemistry for any one to understand the chemical nature of manure. You see, reader, that with common attention, bestowed for an evening's reading, one may learn these chemical terms and their meaning. And now, having learned this first lesson, let us review the ground gone over, fix, once and for all, these first principles in our minds. Let us do this, by a practical application of the knowledge we have gained. Let us analyze a plant. Do not be startled at the word. To analyze, means to separate a compound substance into the several substances which form it. This may be done by a very particular and minute, or by a more general division. It may be done for our present purpose, by separating the several substances of a plant into classes of compounds. You are already chemist enough to undertake this mode of analysis; in truth you have already done it, again and again. For our purpose, the ancient chemists had a very good division of all matter into four elements; fire, air, earth, and water. Now, by fire you separate plants into the other three elements. You are, reader, though perhaps you do now know it, somewhat of a practical chemist. Whenever you have burned a charcoal-pit, what did you? You separated the wood into air, water, and earth.

You drove off by heat or fire the airy or volatile parts of the plant, you left its carbon, or coal; if you had burnt

this, you would have left ashes. Now these ashes are earthy parts of plants. If you burn a green stick of wood, you drive off first its water and volatile parts, which form soot. You burn its carbon, and leave its ashes or salt. So that by simply burning, you reduce the substance or elements of plants to water, carbon, salts. All plants then, without exception, contain the several substances in our list above, as water, carbon, and salts. To apply this knowledge to manure, we must say a word on the form in which some of these, which we call the elements of plants, exist in them. The sap is water; it holds dissolved in it some salts of the plant. This sap, or juice, forms a pretty large proportion of the roots, say seventy-five to eighty parts in one hundred, of potatoes, turnips, beets, &c. This may be called the water of vegetation. If we dry beet-root, or any other plant, we merely drive off this water of vegetation. Now what have we left? To go back to our process of analysis, let us char the dried root. We drive off more water and volatile parts. This water did not exist, as such, in the plant. It existed there as hydrogen and oxygen gas. Now this word gas is a chemical term, and it means any substance in vapor, which cannot be condensed into a liquid or solid, at common temperatures. Different gases may unite, and so become solids or liquids. Steam is not gas, for it is the vapor of water, and immediately returns to the state of water, below 212 degrees. Perfect steam is invisible, so are most gases. The air we breathe is composed of two gases, oxygen and nitrogen. We do not see them; we cannot, by cooling or compression, make air take other shape than invisible air. This is the general property of gas, as distinguished from vapor or steam. Oxygen and hydrogen, in plants, exist in just the proportions to form water, but we do not know that they are united in these proportions. We have compelled them to unite, by heating the substance or root. The carbon is by this same process consumed, and, you know, has thus formed carbonic acid. Besides this, a portion of the carbon unites with some of the hydrogen of the plant. This forms light, inflammable air. Now you may collect this light, inflammable air, in any stagnant water where plants are decaying. Decay gives exactly the same products, as are formed in making charcoal. Decay is only slow combustion, or burning; no matter whether we char the plant or leave it to decay, we obtain exactly the same products as we did by our analysis, that is, carbon and salts.

But because there is not heat enough, we leave by decay, a portion of the hydrogen and oxygen still united to the coal. A slow *mouldering* fire leaves products more like those of decay. Decay is a slow, mouldering fire, hence the products of the decay of plants, are very aptly termed *mould*. It is the product of a mouldering fire, that is, an imperceptible union of the oxygen of the air, with the carbon of the plant. A union is slow, that it gives out neither heat nor light. And yet it is in its results, the same as if fire had actually been seen and felt. Mould contains, then, a part of the carbon, oxygen and hydrogen, or, if you like the terms better, mould of soil consists of the water and coal and salts of the plants. Mould is truly manure. If the mould of soil, as it has thus been defined, were separated from the earthy portions of soil, it would deprive that soil of the power of growing crops. Here, then, we come to a broad distinction between soil and manure. The soil is the earth on which plants grow. The mould is the manure of that soil. The soil is the earthy; the mould, that is, the carbon and salts, together with the elements of water, are the vegetable part of arable land. But though the earthy part, the soil, as it is usually called, acts as a support, on which plants grow, it does not play a merely mechanical part. It was a distinct, decided, and important action upon the manure. This action is chiefly chemical; and the fact that soils and manures do mutually affect the growing plant, is proved by the circumstance, that the first plants which grew derived their salts from the earth.

But this chemical action of soil does not belong to the present discussion. We can understand what manures are, without deciding how they act. We can theorize and guess about the how of their action, when we have learned what they are. That is chiefly what the farmer wants to know. He wants to know what manure is, and what is likely to act as a manure. To these points we shall confine our present remarks. Pointing out the great principles, applicable to all manures, the nature of soils, and the manner in which they affect manures, must be left for another essay. The vegetable or manure part of soil alone, is now to be considered. Consider now, reader, the great results to which our analysis has led us: that a slow, mouldering fire gives us the same products as are formed by decay; that this is only a slow, mouldering fire, and that mould, its product, is the natural manure of plants. It follows, that whatever substance produces mould, that is, water, carbon, and salts, may be used instead of this natural manure. Among the salts found in mould, some are volatile, and are easily dissolved by water. Others are fixed, that is, not evaporating easily or not at all, and are quite insoluble in water. Now the first, or volatile and soluble, first act when in manure. They act quick, and are quickly done. The fixed and insoluble act slower, they last longer. The volatile act in the early stages of growth, the fixed in the later periods. The great difference in the action of manures, depends almost entirely upon the salts which they contain. These are the most important and essential. It is not so much the vegetable mould of manure which you want, as the salts which it contains. This a well settled principle. Land which has undergone the skinning process, old, wornout, and run out land, still contains a very large portion of vegetable matter; the coal or corbon of mould without its salts. Give this wornout land salts, and you may, by these alone, bring it back not only to its virgin freshness, but you may even by salts alone make it fairer and richer than it was before man ever cultivated it.

Too much stress has been all along laid upon the kind of soil. Go now to "Flob," in West Cambridge, no better farms or farmers look the world through. Ask any of these practical men, whether the sandy and gravelly soil of Old Cambridge Common, or even of Seekonk Plain, can be made to bear as rich crops as their land? They will tell you yea. If your land will hold manure, muck it well, and it will be as good. Now, this holding of manure belongs to the subject of soils, and throwing that out of consideration, it is found that even lands which do not hold manure, which have been worn out and exhausted by cropping, hold yet a great deal of insoluble coal of mould. They want salts, and something which will make this inert, dead vegetable matter of the soil, active. The mould is active in proportion as it is more or less dissolved by water. Mould consists of two parts; one is dissolved, though only in a slight degree, by water; the other is not dissolved by water. Some substances, however, do render mould very easily dissolved by water. Hence, if you reflect a moment on these facts, it will be seen that mould itself, being valuable in proportion to the ease with which water dissolves it, that whatever substance so enables mould to dissolve, may be added to it, and thus increase its value. Now the things which do this are the alkalies, soda, potash, and ammonia. These principles being well settled, we may enter on the consideration of each different manure. They will be valuable in proportion to the quantity and kind of salts, each contains, added to the power they may have by producing by their decay, substances which make their mould soluble. Now this last property, that is, the property of producing a substance which makes mould soluble, depends wholly upon the nitrogen of the manure. This nitrogen, in the process of decay, becomes volatile alkali or ammonia. The word ammonia, will occur so often in the present discussion, that we should endeavor to fix some definite idea to it. You need not, reader, be acquainted with all its chemical properties, I suppose every man who will be likely to read these remarks, has smelled ammonia. It has been already said, that it gives the peculiar pungent smell to the common smelling bottle.

This is volatile ammonia. It is always formed when animal or vegetable bodies decay.

It has been already said, and is now repeated in order that it may never be forgotten, that ammonia is formed by the union of hydrogen and nitrogen. Hydrogen and nitrogen, two airs, nitrogen forming four fifths of the air we breathe, let that be borne in mind, and without going into the chemistry of ammonia further, or the mode of calculating how much ammonia a pound of nitrogen will make, it may be laid down, and must be remembered too, that every pound of nitrogen may be called two and a half pounds of sal volatile, or smelling salts of the smelling-bottle. Two and a half pounds of volatile ammonia formed from one pound of nitrogen. If then we can determine, as chemistry may, how much nitrogen exists or forms a part of manure, two and a half times that will be the ammonia of that manure. If then the vegetable part of manure is as we have said, valuable and active, in proportion to its degree of being dissolved by water, then, as ammonia gives it this easy solubility, we may safely say, that the quantity of nitrogen in manure, is the measure of the value of its vegetable part. One thing must be guarded against, not to place from this view the whole of the value of manure upon its ammonia. Remember that manure consists of carbon, water and salts. The whole are equally essential to its action. There is no eye, nor ear, nor foot, nor hand in manure, which may say to the other members, "I have no need of thee." The whole act together; but it is not to be doubted, that ammonia is the heart of manure, and keeps up the healthy circulation among the other members.

The Season for Trimming Trees.

As soon as planting is over we should look to our apple trees and cut off the surplus branches. We cannot recommend cutting large branches in any case; we usually do more hurt than good when we take off a limb that is more than two inches in diameter, for the wound will not often heal soon enough to prevent decay at the heart. A tree will sometimes look more thrifuly, for a time, n consequence of lopping large branches, but the improvement will not be lasting. If trees are attended to annually there will be no need of cutting large limbs. If they have been long neglected we should content ourselves with trimming out the small limbs and suffer the tree to continue in the shape that it has already formed.

We may not be able to give any satisfactory reason for preferring May to March for trimming apple trees. Most farmers however agree that the sooner the wound is healed the better, and that it is not of service to draw forth much sap at the wound. Now it is certain that a wound never begins to heal till the tree has put forth its leaf. It has no means of making new wood before it has leaves, for the sap that forms the new wood passes through the leaf. From the time of trimming, then, to the forming of the leaf your wound is exposed to the weather and the process of healing has not commenced.

We find that when a limb is cut in July there will be about as much new wood made to cover the wound, during the season, as when the limb is cut earlier. There is a critical time, however, in July, between the first and second growth of the season, when the sap will run from a wound and will discolor the bark for a foot or more below it; we notice this in trimming nursery trees, and we think trimming in July is not judicious.

As to the comparative waste of sap in March and May we call the attention of our readers to the practice of tapping the maple for the purpose of gathering sap. All know that no sap can be gathered in May, and not much in April, in our latitude. Sap runs most freely in March. For this reason we never trim grape vines in March. But after the leaf is formed the vines will not bleed.

You want a fine saw to trim with, to make as smooth a wound as may be, and if a knife is used after the saw the wound will heal the sooner. Yet we often see trees trimmed with an axe! We also see the bark torn off of the limbs by the use of heavy boots of the trimmer. All will own this is barbarous. If you stand on the tree while trimming you should wear slippers or thin shoes.

When no limbs larger than one inch in diameter are cut, the wound may be expected to heal over in a couple of years; in a thrifty tree it will heal in one year. When only small limbs are cut there will be no need of covering the wound with clay or with any kind of plaster. We cannot find that limbs which have been grafted and then covered over with any kind of compost heal faster than limbs uncovered. A limb should always be cut in such a manner as to let no rainwater stand in the little cup that will be formed by the healing of the wound.—*Mass. Ploughman.*

Cure for Burns.—After opening the vesicles, if they are formed, the part is dipped in cold water, and then plunged, still wet, into flour, keeping it there for a minute or two; by this means a certain quantity adheres to the part, and prevents the access of the air. It is remarkable that the flour falls in the scales from the surrounding parts the next day, whilst on the burn it remains adherent.—*Medical Times.*

Hoarseness.—One drachm of freshly scraped horse-radish root, to be infused with four ounces of water, in a close vessel, for two hours, and made into syrup, with double its weight in vinegar, is an improved remedy for hoarseness; a teaspoonful has often proved effectual; a few teaspoonsful, it is said, have never been known to fail in removing hoarseness.

New Method of obtaining Cream.

We extract the following from the valuable Report of the Hon. Mr. *Ellsworth*, Commissioner of Patents.

New method of obtaining cream from milk; by G. Carter of Nottingham Lodge, near Eltham, Kent.

The process of divesting the milk of its component portion of cream, to an extent hitherto unattainable, has been effected by Mr. Carter, and is thus detailed by that gentleman in a paper presented to the Society of Arts:

A peculiar process of extracting cream from milk, by which a superior richness is produced in the cream, has long been known and practiced in Devonshire; this produce of the dairies of that country being well known to every one by the name of "clotted" or "clouted" cream. As there is no peculiarity in the milk from which this fluid is extracted, it has frequently been a matter of surprise that the process has not been adopted in other parts of the kingdom. A four sided vessel has been formed of zinc plates, twelve inches long, eight inches wide, and six inches deep, with a false bottom at one half the depth. The only communication with the lower apartment is by the lip, through which it may be filled or emptied. Having first placed at the bottom of the upper apartment a plate of perforated zinc, the area of which is equal to that of the false bottom, a gallon or any given quantity, of milk is poured (immediately when drawn from the cow) into it, and must remain there at least for twelve hours. An equal quantity of boiling water must then be poured into the lower apartment through the lip. It is then permitted to stand twelve hours more, (i. e. twenty-four hours altogether;) when the cream will be found perfect, and of such consistency that the whole may be lifted off by the finger and thumb. It is however, more effectually removed by gently raising the plate of perforated zinc from the bottom, by the ringed handles, without remixing any part of it with the milk below. With this apparatus, I have instituted a series of experiments, and, as a means of twelve successful ones, I obtained the following results:

Four gallons of milk, treated as above, produced in twenty-four hours, 4½ pints of clotted cream; which after churning only fifteen minutes, gave 40 ounces of butter. The increase in the cream, therefore is 12½ per cent., and of butter upwards of 11 per cent.

The experimental farmer will instantly perceive the advantages acruing from its adoption, and probably his attention to the subject may produce greater results.

FROM MR. FOY ON PRESERVING BUTTER.

Hartford, Jan. 12, 1844.

Sir:—In answer to your enquiry, What has been your practice in putting up butter, especially for preservation in hot climates, or for long voyages? I will cheerfully state that I have had considerable experience on this subject, and in some particulars, good success. There are many things required to insure good butter. The butter itself must be well made; that is, worked enough and not too much, and salted with rock salt. This being well done, and the buttermilk all expelled, the butter may be packed in good, white-oak, well seasoned casks, well filled. In cool climates larger casks can be used. In hot climates it is best to have small casks—say from 25 to 30 lbs.—so that too much need not be exposed while using. Then put these small casks into a hogshead, and fill up the same with a strong pickle that will bear an egg, and the butter may be shipped to the West Indies or Europe, and kept perfectly sweet. I have never found saltpetre or sugar of any benefit. Butter of my packing has opened as good in the West Indies as it was in Connecticut. I will remark, that to keep butter in ice-houses, when it remains frozen, will answer, if the butter is to be continued in the same temperament; but if it is exposed to warm weather after being taken from the ice-house, it will not keep as long as if it had not been exposed to so cold a temperature. Yours, respectfully, G. Fox.

Hon. H. L. Ellsworth,
Commissioner of Patents.

Compost Manure.—A correspondent, who has just commenced farming, desires to know the "cheapest method of making compost at the shortest notice." This is a desideratum to the farmer;—a question in which every one is interested, and which is intimately connected with the fertility of his soil, the abundance of his harvests, and the profit on his expenditure in money or labor, or both. An answer to the question, however, cannot be given, which will *hit* every case, because of the different location, and of the abundance or scarcity of the means, which will exist in different situations. We would advise our friends to seek out a place, if such an one can be found in his premises or neighborhood, where swamp muck can be found in abundance, and of easy access. This word, "*muck*," is a general term, and is usually applied to any deposit of vegetable matter in a moist situation. Sometimes it occurs in a state of dark, finely divided matter, which is more properly speaking, *muck*. Sometimes it occurs in the form of fibrous matter, matted and interwoven together, when it is called *peat*. In each case it contains a large quantity of that peculiar substance which is now called humus, and which contains one of the essential elements of the food of plants. It is, however, in an insoluble state, and which in this state, that is, as long as it cannot be dissolved in the water or moisture which is in the soil, it cannot be taken up by the pores of the roots, and converted to the substance of the plant to which it is applied. The experiments of Dr. Dana, of Lowell, (Mas.,) have proved that the best substance which can be added in order to change this *muck* from an insoluble to a soluble state, is alkali. A mixture, therefore, of ashes with it, will bring about the desired change. Leached ashes will answer very will for this, but unleached ashes are better because of their containing more potash, and, of course, require a less quantity of them. The cheapest mode, therefore, of making compost, is, when muck and ashes can be easily obtained, to mix them together in suitable proportions. But our friend wishes to know the quickest mode, as well as the cheapest. Whether this dispatch and cheapness can be combined together, depends very much on circumstances. By hauling muck and ashes into our cattle yard or into the hog sty, and letting them be there to undergo the changes which will inevitably take place during a six months exposure to the operations which must act upon it, we get a first rate manure, at a cheap cost. If we mix the muck and the ashes together, and occasionly shovel them over so as to intimately incorporate them, we get a cheaper compost, but not so rich in the nutritive ingredients as if it had been exposed in the cattle or hog yard. The most expeditious mode of decomposing muck, straw, sods and such like materials, will be to combine them together in a heap, or large mass, and water them occasionally, with what we call a rotten liquor, or in other words, water which is impregnated with vegetable and animal matter, as is often found in some stagnant "*puddle*," or pond-hole. Several patents have been taken out in this and other countries, for peculiar modes of mixing these materials, but they cannot be very valuable to the inventers, for the operation can be so varied that the same results can be obtained without following the same course that they do.

The main object in these cases is, to bring on decomposition, and the laws of nature, when all the requirements of decomposition are at hand, will go on and produce this result without the aid of a *patent right*. These requisitions are—moisture—heat—and oxygen. The materials being packed together, are watered occasionally by the above named liquor, which is poured into holes made by a crow-bar into the mass, and in the course of two or three weeks the fermentation has been so complete as to reduce the whole to a soluble manure.

We will publish, ere long, Jauffret's mode of preparing manure, according to his specification of his mode, which was patented in England, as long ago as 1837. The ingenuity of the farmer will point out to him many expedients for bringing about the desired object of making compost, which the particular circumstances of his situation may require. He must bear in mind that one object is, to reduce vegetable and animal matter to a soluble state, and in a compost, materials are put together in all stages and conditions, from that which is dry and inert, to that which is already undergoing fermentation. A little experience will soon give a person an insight into the "*why and the cause.*"—*Maine Farm.*

From the N. E. Farmer.

Analyses of African and Peruvian Guano.

Mr. Breck—Having received from authentic sources, specimens of the Peruvian and African guano, I have made comparative analyses of them, and I throw the results into this form for the sake of being better understood by agriculturists, although it exhibits but a small portion of the labor I have bestowed on this complicated substance:—

	Peruvian. per cent.	*African.* per cent.
Dried in a water bath (temperature 108°,) one hour, - - loses (This loss is chiefly moisture.)	10½	19
Dissolved in cold water—that is, washed until the water showed on reaction by chemical tests—loses (This loss is soluble salts, chiefly of ammonia, with a little sea-salt; and although there appears more of these in the Peruvian than the African, yet if the excess of moisture in the latter be taken into account, the quantities are nearly the same.)	62½	58¾
Heated to redness for twenty minutes, - - - - loses (This loss is the volatile salts of ammonia and the organic matter.)	54½	64
This third experiment was extended in order to separate the volatile salts from the organic matter: the result was—organic, - - -	24	14½
Volatile, - - - -	30½	49¾

Deduct from this 49¾ the 9 per ct, excess of moisture in the first experiment, and we have still 10 per cent. volatile (ammoniacal) salts in favor of the African.

In four experiments with each, the amount of phosphate of lime and magnesia fluctuated in both, from 10 to 11 per cent. I found, also, small proportions of oxalate of lime, sulphates and sea-salt, with a trifle of sand.

I am aware that my analyses differ somewhat from those made in England, France, and Germany, but not more than these differ from each other; nor is this at all surprising—for several of the ingredients of this manure are only now beginning to receive that attention from chemists which will enable them to analyze it in the perfection required by science. On this subject, see the late Transactions of the Chemical Society of London.

Mr. Davy, of England, does not find urea in the African guano. In my sample, I believe there are strong indications of it, although I have not sufficiently studied this part of the subject; but this ingredient so easily undergoes change, that a difference of this kind is not improbable. Still, urea as forming carbonate of ammonia and oxalates, is a valuable substance to agriculture. I believe that the African is the most recent formation.

I have furnished some of both kinds of guano to a friend, who has put them to the only true test in comparison with each other—that is, the production of vegetation—and I hope this autumn to hand you the results of these experiments, which are proceeding with the utmost attention to all concomitant circumstances.

In the meantime, I can only state my present impression that the African guano will be found equally beneficial to agriculture as the Peruvian.

I should be unwilling to add to the labors or expenditure of our Agricultural Societies, but as the trade with Africa seems to centre here, would it not be wise in them to offer a premium for the first two or three cargoes of guano brought here direct, as well as for the best instituted experiments with it. There is certainly weight of evidence enough in existence to prove its great importance as a manure. On this subject, I beg to state that I have not the slightest pecuniary interest in any such cargoes, nor have I any experiments on hand. I have only exerted myself in instigating others.

L. E. Teschemacher.

An Operation on a Fowl.—A few days since a very valuable hen of the dorking species, belonging to L. F. Allen, Esq., of Black Rock, began to droop, and gave symptoms of being seriously indisposed. This being observed by an old lady residing near by, she examined her, and soon became convinced that the hen had taken some substance into her crop, which was much distended, which defied the powers of the organs of digestion. As the only way of affording relief an incision was made in the breast, the crop taken out, and on emptying it of its contents, a piece of India rubber was found in the lower part, which had caused all the mischief. This was removed—the crop placed back again, and the incision sewed up, and when the hen was again let down into the yard she immediatly pitched battle with and flogged two other fowls, and we are informed by a gentleman, who saw her a day or two afterwards, that she was doing well.—*Gaz.*

THE AMERICAN FARMER.

PUBLISHED BY SAMUEL SANDS.

DANA'S PRIZE ESSAY ON MANURES—We commence to-day this admirable paper, and shall continue it till concluded; and, in order that our readers may not have too much of a good thing at once, we shall endeavor so to divide it, as to ensure its careful perusal.

Professor Dana is too well known to the agricultural reader to require any commendation from us. His contributions upon agricultural chemistry have long since placed him upon vantage ground in the opinion of all well informed farmers, and we are sure that all who may have read his former productions, will go to the work of reading the present essay with an appetite that will need no brush. To those, if there be any of that class, who are not familiar with his writings, we will remark, that he is one of the best, if not the very best, agricultural chemist in the country; that to a highly cultivated mind and profound knowledge of the science, he superadds an enthusiastic zeal for the cause of agricultural improvement.

PEACH TREES—The roots of Peach trees should be carefully examined during this month for worms, and treated as we advised in our last paper. A little care and labor *now*, will be the means of saving them from an enemy no less subtle than destructive, and of securing them from premature decay.

MADDER—The culture of this plant might be advantageously introduced into our country. In *moist* lands of fair quality, it would pay as well as any other crop, and, by adding to the diversity of the agricultural products of our country, would tend materially to increase its sources of prosperity, as every new employment for labor expands its means of accumulating wealth.

SMALL GRAIN AND OTHER CROPS.—From all the information we can glean from our exchanges, as well as from private sources, we are induced to believe that the various crops of small grain, as Wheat, Rye, Barley and Oats, promise abundant yields. There are some parts of the country which furnish exceptions, but upon the whole unless something unforeseen should occur, these crops will turn out largely above the usual average crops.

Of the appearance of the corn crop our information is too limited to form any thing like a definite opinion, tho' all we have heard is favorable.

The *Cotton* and *Sugar* crops of Louisiana have suffered greatly by drought, and the opinion is entertained by the papers in that quarter, that not more than three-fourths of an average crop of either will be realized. If the diminution in the first of these crops should not be greater than anticipated, and a corresponding diminution should take place in the other cotton growing regions, we will hazard the opinion, that more money will be realized in the aggregate, than if the crop were to turn out a full one, as over-production has a greater influence than any thing else in bringing down prices.

Of the *Tobacco* crop, it is too early to speak with any thing like precision; but as its culture has rapidly extended in the west and south, it is fair to presume that the crop of 1844, will exceed that of 1843, from 20 to 25 per cent.

The *Hay crop* will, we think, be a large one.

A NEW AND EFFECTIVE SUBSOIL PLOUGH—A NEW IMPLEMENT OF HUSBANDRY.

The Editor of the Boston Cultivator who has lately visited the House of Refuge at South Boston, in giving a description of the farm, its inmates, management and implements of husbandry, makes the following remarks. The institution is under the superintendenceof Captain Daniel Chandler, and from the report of the Editor of the Cultivator, is conducted with most commendable skill, whether regard be had to the fatherly care which Capt. C. exerts over its unfortunate inmates, to the discipline and economy of the establishment, or to the skill with which he cultivates the farm. Though we could dwell with pleasure upon the objects and ends, in a moral point of view, of such an establishment, we shall defer doing so now, as our intention in taking pen in hand is simply to introduce to our readers two implements whichis there used with the most beneficial effects.

The *first* is the SUBSOIL PLOUGH, an implement which we confess we are solicitous to see introduced into general use in all stiff soils, as from the slight opportunities we have had of observing its operation we think most favorably of it.

The *second* is a *new* implement, invented by the superintendent of the Boston House of Refuge, and, from the subjoined description of it, we presume it is a most admirable contrivance to reduce rough tenacious lands to a state of pulverization.

"*A new Subsoil Plough.*—We saw at this establishment a subsoil plough of novel construction, designed and made by Capt. Chandler. It is well constructed for strength, for running steady and keeping its true position with very little labor of the ploughman, and for a thorough and deep pulverization of the soil, with a moderate draught. It will run fifteen inches deep below the wake of another plough. He has subsoiled several acres with this plough, running from twelve to fifteen inches deep after a common plough that went six inches deep. The soil was clayey, full of small stones, and now and then one of a good size. A team of three horses was amply sufficient, and some over an acre was ploughed in a day, leaving the soil so light that it was difficult to walk on it.

A new Implement.—Capt. Chandler has made a new implement, without a name. It is constructed as follows: A beam of strong hard wood is made, about 6 feet long, and about 6 inches square; into this are put 12 teeth, about 5½ inches apart, below the beam about the common length of long harrow teeth; these teeth are flat, with a sharp edge forward, and they are made at the lower part, or point, with a moderate curve forward, that they may incline downward into the soil. Handles are fastened to the beam, and with bars of iron it is fastened to the axel of a pair of wheels; the forward wheels of a wagon will answer for this purpose.

Thus constructed and hung to the wheels, it is drawn by a horse, or oxen will do, and the person holding can bear off the handles, or step on the beam and ride there, or to relieve it when coming in contact with a fast substance, he can readily raise it over the impediment. When going from place to place it may be turned upon the axel and safely ride there. The object of this implement is to cut to pieces sods and turfs, and finely pulverize them, which it will do more effectually than a harrow, as the teeth are sharper; besides as it covers a small space of ground, the teeth being all in one line, the holder had complete command of it; and as the teeth bent forward and run under the soil, they raise it and leave it lighter, down some depth than a harrow, which is often dragged over the soil and makes it more heavy. This important implement will doubtless answer a good purpose in cutting up old grass lands, disturbing the roots and loosening the soil, and allowing a top dressing of manure to work down among the grass roots, assuming in this respect the purpose of a scarifier."

TARES OR VETCHES.

To the Editor of the American Farmer.

The Irish gentleman, who sent me the paper from which I cut and sent you some observations about *Vetches*, seeing the use that had been made of the extract in a late number of the American Farmer, put on paper and left with me, for publication if you see fit, the accompanying remarks:

To one not familiar with his autography, it is not easily read, but I have not time to copy, and must therefore commit it to the vigilance of your proof reader. It ought surely to be one of the amusements, as it is one of the imperious duties of gentlemen farmers who have leisure and means, to import and try all things, which in the riculture and horticulture of other countries are found useful or agreeable, unless there be something in our climate to render the cultivation of it obviously impracticable or unprofitable, and our country runs through so many latitudes, that the climate of some portion of it must be adapted to almost every fruit and flower of the earth.

May 27th, 1844. J. S. S.

I consider *Tares or Vetches*, taking all things into consideration, as one of the most valuable crops to the general farmer that he can cultivate, for the following reasons. It does not require rich ground. It produces when sown in October, an early and valuable crop, particularly well adapted for feeding horses and cows, therein it cleans the ground from almost all kinds of weeds, and is got off in time to sow turnips or buck wheat, and freqnently in time to plant a late crop of potatoes. It produces more feeding off the same quantity of ground than almost any other crop, and if the seed is allowed to ripen, it yields a very large return, 40 to 50 bushels per acre. If sown for saving the seed, it should be sown as early in the spring as the weather will permit, and not too thick—about 2 bushels to the acre. If sown for feeding, 3 bushels may be used. If mixed with the horse bean in sowing, it increases its value, and from the bean in some measure supporting the vines off the earth, it is less likely to rot. If sown with barley or oats, for cutting green, or with rape seed, its value is increased. It has one peculiarity, that after a crop of vetches come off poor ground, a good crop of oats will be obtained.

THE PEACH WORM OR BORER.

We are desirous that our readers should be acquainted with this worm and its habits; and as the drawing takes up but a precious little room in our columns—not a fiftieth part so much as an elephant or a Durham bull, which after all are more show than use—we shall be excused though we exhibit him more than once.

In our last paper we gave very accurate cuts of the male and the female moths or flies that hover about the trees in summer and lay their eggs where nature has taught them their young will be likely to find food. The flies lay their eggs near the roots of the trees or on the limbs that are wounded and bruised, whence issues the rich gum of the tree. We have found the worms in the lumps of the gum on the body of the tree.

But generally you will find these worms under the surface of the ground and preying upon the roots of the peach trees. These worms are not properly borers; they are not formed to enter, like the apple tree borer, into the heart of the tree, or to drill a round hole in the sapwood; but they work upon the bark and the sapwood and girdle completely the main roots of the tree.

If you dig about your trees at this season you may find the worms of all lengths, from nearly one inch to one-fourth of an inch. They are whitish in the body, with yellow heads. They have legs, while apple tree borers have none, and they are not formed for boring holes directly into the wood. The longest were from the early eggs, and the short ones were probably hatched as late as October.

Dr. Harris, of Cambridge, to whom we acknowledge our indebtedness for much of our information on the subject in question, supposes that the worm continues about one year to make its depredations before it becomes an insect; or at any rate that it lives through the winter before its change takes place.

MODES OF DESTROYING THE WORM. Much time has been spent in digging about the roots and putting to death this destroyor, but by cutting among the roots we cause the same mischief that is caused by the worm, we let the gum out. Strong lie would kill them if it could reach them uncovered, and perhaps there are many substances that would be fatal. But we find that boiling water may be poured upon the roots in large quantities without injuring them. A whole pailful has been turned on to a single tree that was not three inches in diameter.

We are not certain how large a quantity of boiling water may be turned on with safety, but we have not yet known a tree killed by hot water. It is probable that any tree will bear enough hot water or suds to destroy the worms if proper care is taken to loosen the soil about the roots that the liquid may reach them. But the right way is to destroy the eggs or the young worms before they become large enough to do any mischief. And as the eggs are very generally laid at the root of the tree, we can effect the object by placing something there that is offensive or destructive.

Tobacco leaves have been recommended, charcoal dust, hard coal ashes, blacksmith's coal ashes or cinders, &c. &c. Lime is good as a destroyer; but ashes are still better, and ashes will prove beneficial to the tree while at the same time it will kill the worms.

When defects are found in the body of the tree and the gum issuing out of wounds, is advisable to clear out all the loose matter and put in clay mortar with a mixture of fresh manure from the cow yard.

We can afford to take some trouble to secure so rich a fruit as the peach. Nothing valuable can generally be obtained without labor.

These worms are sometimes found in cherry trees; though where peach trees are plenty, they seem to prefer them to any other.—*Mass. Ploughman.*

From the London Gardener's Chronicle.

Theory and Practice of Manuring Land.

Under this head I propose to discuss the best means of retaining or increasing the fertilizing properties of manures.

Plants, having no power of locomotion, must have their food supplied to them upon the spot where they grow. Now, as from nothing it is clear nothing can be made, so is it equally certain that the grain, leaves, straw, and roots of a stalk of wheat, must have derived the materials of which their fabric is composed, either from the earth in which the straw, leaves, and grain grow. Now, we have only to apply the same truth to different parts of which a plant is composed, and instead of saying that as a whole it derives its material from the earth or air, we prove that it must have carbon and the elements of water for its starch and sugar, an addition of nitrogen for its gluten or albumen, phosphate of lime and magnesia for the husk of its seed, and silicate of potash for its straw; and we have only further to prove that these elements must be present for one crop, and with variations or omissions are essential for another, and also that by the addition of individual elements, we can increase the quantity of individual produce, as azote for gluten, carbonaceous matter for starch, —we have only to prove this, and we arrive at once at the foundation of Agricultural Chemistry, at the basis of those great principles which must ever guide the scientific farmer, in a judicious application of measures—the food of plants. A moment's reflection, too, will convince any one who thinks it worth while to consider the subject at all, that the cause of failure, which we so often hear of in the application of manures, arises from the want of attention to these principles.

Let us take an example:—A farmer is anxious to try a certain manure: we will say nitrate of soda or potash. He applies it to his land according to the prescribed rules of so much per acre.

Now the nitrate acts as a manure principally, if not entirely, by supplying the alkali, soda, or potash to the soil. The Cerealia (wheat, barley, &c.) exhaust the soil of alkali, because a union of it with silicic acid, is necessary for the stiffness of the stalk; and this, I may observe en passant, is the cause of the green, rank appearance of the grain crops to which the nitrates are applied.

But it may happen, and does frequently happen, that there is no deficiency of alkali in a soil. Now in such a case it is obvious that the application of the nitrate must fail. Another farmer applies it where the alkali is deficient, and it succeeds: hence the discordance in experiments, of which we hear so much.

I will take a second example: A crop of turnips or mangold-wurzel, or potatoes, is manured in part with guano and azotised manure, and the crop from the last named is the best. Another crop of wheat, barley, or beans, shall be manured in a similar way, and that from the guano succeed best. Now in these cases the results are strictly in accordance with chemical facts; and yet the experimenter who fails on the turnip crop, rejects the guano as a useless expenditure.

There is another source of apparent failure and consequent disappointment in the use of guano and artificial manures, which cannot be too strongly dwelt upon: I mean the fallacy of judging the effect of manures by appearances. If wheat is manured with rotten stable manure and guano, or urine, the plants from the stable manure will have the freshest, greenest, and strongest appearance; but notwithstanding this, the grain from the guano will be the best sample, superior both in quality and quantity to that in the other experiment.

Experiment, sound co-operative experiment, is the means by which these principles can be proved true or false; but no good results will ever be obtained by putting a bushel of this or that manure at random upon the first crop that comes to hand, and judging of the result from mere appearances; on the contrary, much mischief may arise, and a certain retardation of the application of one of the most interesting and important of the sciences to Agriculture. Mr. Pusey, was, to a certain extent, right when he stated that the experiment of the Duke of Richmond was the first real contribution of Chemistry to Agriculture. But this was not the fault of the science, but of those who have undertaken experiments. An experiment, as Liebig has observed, is the expression of a thought; and whether this thought is that of the chemist or the farmer, it is quite impossible to prove its soundness unless the minutest details are attended to. C. R. Bree.

Dr. Martin on Swine.

To the Editors of the Ten. State Agriculturist:

Gentlemen:—A writer in the April number of the Agriculturist, speaking of the relative merits of the different breeds of hogs, says, "the subject is worth determining." I perfectly agree with him upon this subject. This matter might have been determined long ago, if the advocates of the Berkshires had been willing to have had fair trials made by disinterrested persons.

I raise about fifteen thousand pounds of pork annually for my own family, besides as many hogs as will produce as much more, which are sold. I therefore can speak from some little experience upon this subject, and I consider *experiment* as a much more certain guide than *opinion* in such matters. Those that judge by appearances are often deceived. The Woburn, like all other improved hogs, is made by a cross of a coarse and fine hog, and the one or the other can be made to predominate as the breeder may choose. Bristles are no characteristics of the Woburn stock. It is true some of the Woburns breed back and have bristles, and these are coarse hogs. This is also true of the Berkshires, but the best of each breed have but very little bristle.

Mr. C. says, so far as I have seen the Woburns here they make a bad cross with our common stock. I think it likely that the bristly bony Woburns were either counterfeits or bad selections. Hundreds have been sold in Tennessee as my Woburns, that had not more than one fourth of that stock in them. Gen. Tracy of this county sold two hundred and fifty hogs, all of his own raising, got by a Woburn boar, *that averaged three hundred and seventy-six pounds*—they were from 18 to 20 months old.

But I took up my pen for another purpose, and not to go over the old ground which has once been explored in your paper, which will show that the Woburns *have been proved to be smaller consumers and to give more flesh and weight for food consumed than the Berkshires.*

My object in writing this piece is to make the following propositions: To Mr. G. L. Cockrill to feed ten or twenty spring pigs for pork this fall, to be killed from the 20th to the last of November. The oldest pig I have came on the 6th of March. The most of them to be pigged in April and May. I expect to sell my oldest hogs and make my meat (15,000 lbs.) out of spring pigs. For this purpose I expect to keep my pigs in the following manner: They will run with their mothers until they are about ten weeks old, at which time all my old sows, except a few choice ones, will be spayed. The sows will follow my cattle until the first of May, when they will be turned upon clover and have about as many ears of corn thrown to the sows as there are pigs in the field. This will be repeated daily, and as the pigs are weaned I will have pens built in the clover field, so that the sows cannot go into them, and into these pens I expect to have about an ear of corn put daily for each pig for one month, or until they can be turned into my stubble-fields to pick up the fallen wheat and oats. After this is done they will again go back to the clover field and have the same treatment as before. If Mr. C. is willing to try his Berkshires or half-bloods upon this or any other plan, he will please let me know.

If there are better hogs than the Woburns, I have as much interest in knowing it as any person who has to raise no more meat. And I will not keep any breed that is unprofitable.

I perfectly agree with Mr. C. in the injurious effects of breeding in-and-in. But I think his observations about color rather the effect of observations made upon particular breeds. The Irish hogs first imported into the United States by Green, were full brother and sister—the pigs brought to Kentucky by Mr. Letton were from them, and from these full brothers and sisters has come our supply of Irish white hogs. These hogs must have had extraordinary constitutions to have stood so much close breeding. No wonder there should have been weakness in some part, and my Irish stock showed it first in the skin.

I had once a breed of pale red hogs that were very thrifty.

I would recommend to our southern friends the Neapolitan as vastly superior to the Berkshire, both in fattening and the quality of their meat. They are more productive and better nurses—I have tried them and speak from experience; but with all their good qualities, I gave up the full blood, because being a Southern hog they could not stand our winters without shelters. They have one bad quality in common with the Berkshire, which is a disposition to go wild when raised at a distance from home. S. D. Martin.

P. S. I intended to have said something of the productiveness of the different breeds, in answer to some observations made by Mr. Fanning more than a year ago, but hardly think it necessary However, I should like to have a few sows selected and their produce fattened and weighed at a proper age. What say you, Mr. M. F.?

Near Colbyville, Ky., April, 1844. S. D. M.

Hints to Farmers.—Great profits in agriculture can result only from great improvements of the soil.

Great improvements of the soil can result only from unremitting industry.

The chief study of every farmer *should be what is useful, and what is useless expense, in relation to his art.* The discrimination between these is the master key of the farmer's prosperity. The first should be incurred with a freedom little short of profusion. The last should be shunned, as the sailor shuns the rocks, where are seen the wreck of the hopes of preceding mariners.

Liberality in providing utensils, is the saving of both time and labor. The more perfect his instruments, the more profitable are they.

So also is it with his working cattle and his stock The most perfect in their kinds are ever the most profitable.

Liberality in good barns and warm shelters, is the source of health, strength, and comfort to animals; causes them to thrive on less food, and secures from damage all sorts of crops.

Liberality also, in the provision of food for domestic animals, is the source of flesh, muscle and manure.

Liberality to the earth, in seed, culture and compost, is the source of its bounty.

Thus it is in agriculture; as in every part of creation; a wise and Paternal Providence has inseparably connected our duty with our happiness.

In cultivating the earth, the condition of man's success is his industry upon it.

In raising domestic animals, the condition of his success is, kindness and benevolence to them.

In making the productiveness of the earth depend upon the diligence and wisdom of the cultivator, the Universal Father has inseparably connected the fertility of his creation with the strongest intellectual inducements and the highest moral motives.

In putting the brutal world under his dominion, he has placed the happiness of which their nature is susceptible, under the strong guaranty of man's interest.

Instead, therefore, of repining at his lot, let the cultivator of the ground consider his as among the highest and happiest of all human destinies, since in relation to the earth he is the instrument of Heaven's bounty; and in relation to the inferior orders of creation, the almoner of Providence.—*Southern Cultivator.*

Havoc with the Eggs.—We should like to know how many hen's eggs are consumed during a year in the United States. Ellsworth states that the number annually consumed in France, is *seven billions, two hundred and fifty millions,* (7,250,000,000.)

He also states that the following method is highly approved in England for preserving eggs: Take one bushel of quick-lime, two pounds of salt, eight ounces of cream of tartar, mix the salt with as much water as will reduce the composition to a consistency that an egg will swim in it when put in. Eggs are said to have been thus preserved two years.—*Maine Farmer.*

Wool Washing.—As time of shearing sheep is at hand, and as wool will be more in demand this season than it has been for several years, it behoves the wool-grower to see that it in the best possible condition for the market. This is his duty at all times, if he designs his clip for market; but if he is to work it up at home, it is not so necessary to be so particular with it, as if he were to send it abroad, because those who operate upon it, in the domestic life, can cleanse it thoroughly in their own way and manner. As they do not purchase it by the pound, they run no risk of being cheated by the extra *quantum* of dirt which may adhere to it. On the contrary, there are two reasons why he who designs to sell the whole to the manufacturer, should be careful to have his fleeces thoroughly cleansed. First, because it is the indispensable duty of every man *to be honest;* and second, because the reputation of the wool-growing district to which he belongs depends upon the good condition of the wool which is sent out from it.

The reputation of the wool of Maine has suffered by the inattention of too many of our wool-growers to cleansing their wool. The manufacturer soon learns the quality of the wool, and governs himself accodingly. He makes all due allowance in the price on account of the waste, and while the seller may suppose that he is making great gain by selling the dirt in his wool, at a large price per pound, the fact is that he does not, in reality, get so much for his fleece, as he would, had it been sufficiently washed.

The washing of sheep, as at present practiced, is a laborious and uncomfortable job. The operator generally stands in the water, and washes the sheep by immersing it in the water with himself; but those of the flock which come last, are exceedingly apt to be slighted, for the person becomes weary and cold,and hurries over them without doing his whole duty. In many cases, the sheep are turned out, after being washed, into pastures where they can have access to sandy spots, and they will be sure to lie down on them, and thus the wool becomes filled again with dirt, and is almost as foul as it was before the washing. A clean grass plat should be devoted to the sheep as soon as they come from the stream where they cannot get much dust or other dirt upon or into their fleeces.

We have seen a mode of washing sheep in small streams, which we preferred to the common mode. It is as follows: build a box sufficiently large to hold a sheep, which may be placed like a flume in the stream, where the water will run into it and fill. A gate may be made near the bottom of the end which points down stream, out of which the water may be let when it becomes foul. The operator stands outside and does not get much wet. The sheep is put into the flume and washed, and the water can be let out and replenished at will. This is an excellent plan. The first one of the kind that we ever saw was got up by B. Nason, Esq., when he carried on the farm that he formerly owned in this town, by which he washed the large flock of sheep that he kept. In situations where deep water cannot be had readily, or even where it can, it has been found to be an excellent mode. We hope our farmers will pay attention to the subject of wool washing, and see that every fleece is made perfectly clean and packed in first rate order.—*Maine Farm.*

From the Eastern Gazette.

Hiring Help.

Mr. Editor,—How common is the saying among a class of our Farmers, 'oh I cannot afford to hire.' The truth of the remark we are frequently though reluctantly forced to admit. This class you will generally find to be an honest well meaning, hard working set of men, who deserve a better reward for their toils than they get; notwithstanding they are the very ones, I dare assert, who annually scrape over double the number of acres they ought, of land already exhausted by the unskilful husbandry of their Fathers. (This tenacity of old habits, which have no other recommendation but their antiquity has been, and is yet a serious hindrance to the improvement of our agriculture, their broken down fences afford poor protection to the scanty crops which they have extorted from the earth. Their ill fed Cattle, exposed to the peltings of winter storms, are suffered to roam at large about the farm or highways in search of food and shelter; leaving their manure of so much value to the Farmer, exposed to bleaching winds and rains, or where it cannot be available by them.) But to the text. I do not pretend to say hiring help would better their condition or remedy existing evils, for they most assuredly cannot afford to hire help under this state of things. It would be preposterous to hire men to do that which will not half pay. The success of employing extra labor does not depend so much upon the amount of labor employed, as upon the proper application of that labor. Labor is Capital; Capital is Money. Thus Money, Capital and Labor, are the same; and it is evident the more money is profitably invested in any business, the greater the income to the capitalist. This fact being established proves the ground I have taken tenable, namely, that Farmers can afford to hire help—Look at the Iron manufacturers, or the proprietors of any of the manufacturing establishments in the country; with the labor of his own hands alone, he can barely obtain support for himself and family. His prosperity mainly depends upon properly directing the operations, not only of his own hands, but of others. Now the question arises, how shall the farmer make a proper investment of such capital. Recent surveys and more particularly agricultural periodicals throw much light on this point. Read and adopt for the skinning system of manures and rotation. Thus handle your manures as careful as your money; make your hogs work, turn all refuse straw and vegetable rubbish to some account and you will not fail of success. In conclusion let me say that if you conduct your farming operations in such a manner that you cannot afford to hire help to put every acre under good cultivation, you cannot afford to work yourself, you had better sell your acres and 'hire out,' for if wages are too much to hire, the 'day laborer' has an advantage over you, choose his occupation at once. W. J. M.

Pruning.—There are different opinions as to the best time for pruning fruit trees, but it is generally agreed that pruning should be attended to when the tree is in a thrifty state; then the wound will soon heal, and when the tree is growing and the sap running to the leaves there is less in the wool, so that if a very large limb be cut off at this season, which requires several years to heal the wound, it will season and become hard and sound.

If a large limb be cut off any period from the time the trees are in full foliage and bloom, until December, the wounded will be sound and become well seasoned, and the earlier this is done after the trees have leaved out the more the wound will heal the first season, and the sooner of course will be completely healed over.—The fall is a very favorable time for pruning, so far as it relates to the wounded part remaining sound, but as the hard becomes dead around the cut, the wound will not heal so soon.

But if a tree be pruned in February, March, April or May, before the leaves put out, and the sap has passed into them, the wounded part will be more liable to decay, whether healed over or not, as the wood is full of sap, inducing its destruction the same as occurs on cutting trees in the spring before they leave out, when the wood is full of sap, and leaving them with the bark on.

After the trees are in full foliage and blossom, the sooner they are pruned the better, as they will heal the sooner, but it is very good time to attend to this business till the middle of summer.—*Boston Cult.*

Hiving Bees.—Last season we gave our readers some hints on the best modes of hiving bees, but as they may have forgotten, and as we have now many new readers we will remind them of what we consider the safest and easiest way of securing a young swarm when it commences its emigration from the parent hive.

When a young swarm comes out it usually alights on some low tree or bush, when any such are near the hive, and remains there for some hours, sometimes till the next day unless the bees are secured in a hive. But it is not prudent to wait a great while after the bees have settled quietly on the bush, lest they go off to the woods.

Have your new hive ready and set it on the platform or table that you will place under the swarm; set it *right* side up, by all means, and nearly under the swarm, but not quite under it, and raise it as high from the table or platform as you would on its permanent stool. Then by means of a pole you may stand at a distance and rap the limb on which the bees hang, hard enough to bring nearly all of them down. If they like your hive they will soon crawl up and take possession.

This is a far better mode than the one usually practiced, of holding the hive wrong side up and dropping the bees into it, then turning it over and throwing them into utter confusion, when they must all fall down to the bottom of your hive. In this absurd mode you run ten times the risk of being stung and you stand not so good a chance of securing your bees. Never make a new hive *wet* even with honey or molasses; they fear a wet hive. A very little honey may be rubbed on the inside, and when your bees are wild and contrary a little spirit mixed with honey will make them more docile and incline them to stay.—*Mass. Ploughman.*

From the N. E. Farmer.

Benefit of Mixing Soils.

Mr. Editor:—I was gratified with the communication of L. Bartlett, Esq. on Sulphuretted Hydrogen, in the Farmer of the 3d inst. There is no doubt but *any* mixture of soils, or *any soil* from a considerable depth brought to the surface, will act efficiently as manure, and in many cases very powerfully. Some 16 years since, I built a house, and the earth from the cellar was used for grading. The bottom dirt, which of course came on top, was a fatty blue clay, with a strong sulphur smell. At the east end it was proposed to have a garden, and I intended to haul on a covering of other earth, but other business prevented, and it was planted with cucumbers, squashes, &c. which, much to my surprise, exceeded every thing else in the garden, and for the three years I occupied it, it maintained its superiority.

A few years since, while walking in the lower yard of the Maine State Prison, I observed a patch of corn, cucumbers, &c. growing, so very rank as to induce me to ask the warden what was used for manure. He said, "Nothing, they were planted on earth dug from the bottom of the quarry by some of the convicts, and nothing else was put on them." This was a light yellow loam lying between the joints of the lime-rock, and brought from a depth of 50 or more feet, and did not look as if any thing would grow on it.

I have within a few years fertilized a mere clay bank, by bringing on soil from the road-side; and *any* mixture of soils of different qualities, so far as my experience extends, will improve the crops equal always to the expense incurred, and often much more. B.

Kennebec Co., Me.

Birds vs. Caterpillars.—On Sunday we saw, from our parlor window, on the top limb of an apple tree, a caterpillar's nest that had escaped the general havoc that had been made of their edifices two weeks before.

In a moment after a beautiful little red robin alighted, and without ceremony began to pillage the contents of the nest. How many worms were abstracted we cannot say, bat on examining the nest we found as many holes perforated in it as you will seen in any old target that has been fired at.

We have not yet quite enough robins in this vicinity to do the whole business, but they aid us much. When we have once been over the trees and broken up the nests, the birds find it easier to make an impression. If, in any New England district, there are more robins than caterpillars, drive them this way, if you please, and we will feed them gratis.

The cherry birds have already made our canker worms scarce. If you would have these worms multiply again, kill off the cherry birds in June; it will cost you nothing but powder, and shot, and time; while you will have the pleasure of mangling your cherry tree limbs and detroying more fruit than the birds would carry off.—*Massa. Ploughman.*

Yeast.—Boil one ounce of hops in four quarts of water until the hops fall to the bottom of the pan; strain, and when milk-warm, add six ounces of flour and five of sugar; set the mixture by the fire, stirring it frequently; in 48 hours, add four pounds of potatoes, boiled and minced fine: next day bottle the yeast—it will keep a month. One-fourth of yeast and three of warm water, is the proportion for baking.—*** [The editor of the Chronicle states that he has tried this recipe and found it good.]

Valuable Salve.—Take three carrots and grate them; place in a vessel and cover with lard, without salt. Boil thoroughly, strain and add sufficient beeswax to make a paste. This is a most invaluable ointment or salve, for cuts, burns, scalds or wounds of any kind.—*Sat. Cour.*

Peach Trees.—Screenings of anthracite coal are a good protection of peach trees against worms. Place around each tree, a box two feet square and six inches deep, and fill it with the coal; and they have no indication of worms about them.—*Morris Jerseyman.*

To Prevent Wood Decaying.

Take twelve ounces of rosin and eight ounces of roll brimstone, each coarsely powdered, and three gallons of train oil. Heat them slowly, gradually adding four ounces of bees wax, cut in small bits. Frequently stir the liquor, which as soon as the solid ingredients are dissolved, will be fit for use. What remains unused will become solid on cooling, and may be remelted on subsequent occasions. When it is fit for use, add as much Spanish brown, or red or yellow ochre, or any color you want, first ground fine in some of the oil, as will give the shade you want; then lay it on with a brush as hot and thick as you can; some days after the first coat is dried give it a second. It will preserve plank for ages, and keep the weather from driving through brick work.—Common white paint may be used on top of it, if required, for the sake of appearance. Two coats should always be given and in compound machinery, the separate parts should be varnished before they are put together, after which it will be prudent to give a third coating to the joints or to any other part which is peculiarly exposed to the action of moisture, such as water-shoots, floodgates, the beds of carts, the tops of posts, and all the timber which is near or within the ground. Each coat should be dry before the parts are joined or the last coat applied. The composition should be applied when the wood is perfectly dry. It is necessary to mention that compositions made of hot oil, should, for the sake of security, be heated in metallic vessels, in the open air, for when the oil is brought to the boiling point, or 600 of Farenheit, the vapor catches fire, and though a lower degree of temperature should be used in this process, it is not always possible to regulate the heat, or to prevent the overflowing of the materials; in either of which cases, were the melting performed in a house, fatal accidents might happen.—*Archives of Useful knowledge.*

Borers.—Mr. Wm. Salisbury of Medfield tells us he destroys borers in his apple trees by igniting the common brimstone matches and putting them into the hole bored by the worm so as to fumigate him in his burrow. He first clears out the hole as well as he can, and when he has lighted his match he inserts it while the brimstone is burning.

We should think this a better plan than the one which has been so often recommended, to use a wire or a gouge to cut out the worm. He says he finds, on trial, that this will kill the borer in the tree.

Our plan is to kill the young worms before they enter the bark; yet as some trees may have so many worms in them that they die before the worms come out, in their natural course, it may be proper to try brimstone fumigation, and the little brimstone matches may be tried at small expense.—*Mass. Ploughman.*

FULL BRED DURHAM BULLS.

FOR SALE—4 full bred DURHAM BULL CALVES, from one to three months old—sired by an imported bull Magnum Bonum—who took the premium at the two last cattle shows. Enquire of

June 5 SAMUEL SANDS.

DEVON BULLS.

For sale, 3 full blooded North Devon Bulls, viz.

Marmion, by George, 23 months old, price 50 Dollars.
Frout de Bœuf, by Waverly, 13 months old, price 40 "
Ivanhoe, by do. 9 do. 30 "

The above bulls are of good size, fine form, and in good condition. Apply to JOHN P. E. STANLEY,
may 15 50 S. Calvert st. Baltimore.

AGRICULTURAL IMPLEMENTS.

J. S. EASTMAN, at No. 36 West Pratt st. about half a square west of the Baltimore and Ohio rail road depot, has on hand a great variety of Plows and Plow Castings, and other Farming Implements at wholesale and retail, as follows, viz. his newly patented Cleasy self-sharpening plows of 7 different sizes, (and one large left hand do) he has many testimonies to show the superior merits of this implement.

Also—Gideon Davis' improved ploughs, of all sizes, wrought and cast shares, do do. Connecticut improved, a superior article for light soil; Evans' reverse point ploughs, with cast shares only; Wyman's No. O. self-sharpeners, various bar-share and coulter ploughs and superior side ploughs, etc. etc. Also, corn and tobacco Cultivators, wheat fans, cylindrical straw cutters of various sizes, a superior article; lime carts, superior Pennsylvania made grain Cradles; small Burrstone Mills for driving by horse power or steam; Corn Shellers, Threshing Machines (and horse-powers for two or four horses) made very durable and to thresh clean. Bachelder's and Osgood's patent corn planters, etc. with a great variety of their implements made of the best materials and in the best manner. All the above are sold at reduced prices to suit the times. may 1

NEW PATENT CORN MILL,—CORN AND COB CRUSHER.

The subscribers have recently invented and constructed a Corn Mill and Crusher, to be worked by hand or horse power, which are remarkably simple and admirably adapted to the present wants of farmers. Either of the above machines may be seen in operation at our warehouse, No. 60, Light street.

ROBT. SINCLAIR, JR. & CO.
Prices—Corn Crusher $30—Corn Mills $40. ap 29

JAMES MURRAY'S
PREMIUM CORN AND COB CRUSHERS.

These already celebrated machines have obtained the premium by a fair trial against the other Crushers exhibited at the Fair held at Govanstown, Balt. co. Md. Oct. 18th, 19th and 20th, 1843, and the increased demand enables the patentee to give further inducements to purchasers by fitting an extra pair of grinders to each machine without extra charge. Prices $25, 30, 35, 40, 45.

ALSO, small MILLS, which received a certificate of merit, for $15.

I have also superior CUTTING BOXES, such as will bear inspection by either farmers or mechanics.

Also, Horse Powers, Mills, Corn Shellers, Mill and Carry-log Screws, small Steam Engines, Turning Lathes, &c. &c.

Also, a second hand Steam Engine, 16 horse power, and the works for two Saw Mills.

Any kind of Machine, Model or Mill-work built to order, and all mills planned and erected by the subscriber, warranted to operate well.

☞Orders can be left with J. F. Callan, Washington, D. C.; S. Sands, Farmer office; or the subscriber,

Mr. Abner Linthcum, jr., and all Machinests are invited to a fair trial of Grinding against my Corn and Cob Crushers, and if I do not do more work, taking the power, quantity, and quality into consideration, I will give them my machine gratice.

Patent Rights for sale by the subsbriber.
no 8 JAS. MURRAY, Millwright, Baltimore.

MANGELWURZEL AND FRENCH SUGAR BEET SEED,

Just received and for sale by
ROBT. SINCLAIR JR. & CO.
Ap 22 Seedsmen, No. 60 Light st.

CLEAZY'S IMPROVED SELF-SHARPENING PLOUGH.

J. S. EASTMAN, Pratt street, a little west of the Baltimore & Ohio rail road Depot, would invite public attention to this superior implement, both as to its simplicity, cheapness and good work with light draft. He will furnish patterns to manufactures living out of this state on reasonable terms. may 1

HORSE POWERS AND CORN CRUSHERS.

The subscriber has for sale the above Implements which he can recommend to all purchasers as being SUPERIOR ARTICLES. They are made with a view to strength, durability and efficiency, possess great power, are constructed upon the very simplest principles of mathematical exactitude, and are calculated to do as much work as the largest farmer can desire, and being free from complication, are not easily put out of order, and easy of repair. For proof of their intrinsic value, thesubscriber refers to the following certificate from one of our most intelligent practical farmers, who combines with a knowledge of farming that of machinery, and is every way competent to pass a correct judgment:

GEORGE PAGE, Machinist,
West Baltimore st. Baltimore.

Orders and letters of inquiry, POST PAID, will be promptly attended to. feb 14

I hereby certify that I was one of the committee on Agricultural Implements and Machinery at the last fair of the Baltimore Co. Agricultural Society—that I attended the first day of examination but not the last: that after a full and fair examination of all the other machines of similar kinds, and an interchange of opinions among the judges, it was determined by a vote of 4 out of the 5 judges, to give Mr. George Page the first premium on his CORN and COB CRUSHER and HORSE POWER, they each being considered very superior, both in power and operation, as well as durability to any others on the ground. It was universally admitted, that the Corn and Cob Crusher could do twice as much work as any other machine of the kind on the ground—and I must confess, that I was both mortified and surprised, to find by the award of my co-judges, that they had changed their opinions after I left, and it had been agreed upon to award the above premiums to Mr. Page by so decided a vote as 4 to 1, that they should afterwards change that determination after I had left without consulting me is alike a matter of surprise and mortification. Abner Linthicum, Jr.

HUSSEY'S REAPING MACHINES.

HEMP CUTTERS,
CORN & COB CRUSHERS,
CORN SHELLING and HUSKING MACHINES, &c.
Made to order and kept for sale by the subscriber,
Ap. 17. OBED HUSSEY.

BALTIMORE MARKET, June 3.

Beef, Balt. mess,	8a	Butter, Glades, No. 1,	13a
Do. do. No.1,	7a	Do. do. 2,	7a11
Do. prime,	5a	Do. do. 3,	5a7
Pork, mess	9	Do. Western 2,	6a
Do. No. 1	9a9½	Do. do. 3,	5a6
Do. prime	7½	Lard, Balt. kegs, 1,	6½a7
Do. cargo,	a	Do. do. 2,	none
Bacon, hams, Ba.lb	6½a7	Do Western, 1,	a6½
Do. middlings, "	5a5½	Do. do. 2,	5a5½
Do. shoulders, "	4a4½	Do. do. bls 1,	6a6½
Do. asst'd, West.	4½	Cheese, casks,	6
Do hams,	5a7	Do. boxes,	5a8½
Do. middlings,	a5	Do. extra,	12a15
Do. shoulders,	3½a4		
COTTON—			
Virginia,	9a10	Tennessee, lb.	
Upland,	9	Alabama,	11a12
Louisiana,	11½	Florida,	10a12
North Carolina,	10a11	Mississippi	
LUMBER—			
Georgia Flooring	12a15	Joists & Sc'ling, W.P.	7a10
S. Carolina do	10a12	Joists & Sc'ling, Y.P.	7a10
White Pine, pann'l	25a27	Shingles, W. P.	2a9
Common,	20a22	Shingles, ced'r,	3.00a9.00
Select Cullings,	14a16	Laths, sawed,	1.25a 1.75
Common do	8a10	Laths, split,	50a 1.00
MOLASSES—			
Havana, 1st qu. gl	30a31	New Orleans	31a
Porto Rico,	25½a26½	Guadaloupe & Mart	26a28
English Island,		Sugar House,	28a36
SOAP—			
Baltimore white,	12a14	North'rn, br'n & yel.	3½a4½
brown & yell'w	4½a5½		
TOBACCO—			
Common	2 a 3½	Yellow,	8 a10
Brown and red,	4 a 5	Fine yellow,	12a14
Ground leaf,	6 a 7	Virginia,	4 a 9
Fine red	6½a 8	Rappahannock,	
wrappery, suitable		Kentucky,	3 a
for segars,	8a13	St. Domingo,	13 a11
Yellow and red,	7a10	Cuba,	15 a38
PLASTER PARIS—			
Cargo, pr ton cash	3.12a	Ground per bbl.	1.12a
SUGARS—			
Hav. wh. 100lbs	9a10.50	St. Croix, 100lbs	7.00a8.00
Do. brown	a7.50	Brazil, white,	a
Porto Rico,	6.45a7.65	Do. brown,	
New Orleans,	6½a6½	Lump, lb. c.	
FLOUR—We quote			
Superfine How. st., from stores, bl.			$4.37a4.50
Do. City Mills,			4.50
Do. Susquehanna,			4 50a
Rye, first			3.12a
Corn Meal, kiln dried, per bbl.			2.62
Do. per hhd.			11.75
GRAIN—			
Wheat, white, p bu	1.05	Peas, black eye,	50a55
" best Pa red	95a100	Clover seed, store	$5.50a
" ord. to pri. Md	89a100	Timothy do	2.a2.50
Corn, white,	41a42	Flaxseed, rough st.	1.35
" yellow Md.	43a44	Chop'd Rye, 100 lbs.	1.25
Rye, Md.	53a55	Ship Stuff, bus.	20a
Oats, Md.	28	Brown Stuff,	15a
Beans,	100	Shorts, bushel,	10a
FEATHERS—perlb.			29a
COFFEE—			
Havana,	7 a 8	Java, lb.	10 a12
P. Rico & Laguay.	6¾a 8	Rio,	6¾a7½
St. Domingo,	5¾a 6	Triage,	3½a 4½
CANDLES—			
Mould, common,	9a10	Sperm,	32a33
Do. choice brands,	10½	Wax,	60a65
Dipped,	8a 9		

Cattle—247 head of Beef cattle offered on Monday of which were sold 210. The prices paid ranged from 1 75 to $3 pr100 lbs. on the hoof, which is equal to 3.50a 3.75 net. The average price paid was ab't equal to$5net.

Flour—The holders now generally ask 4.50for all descriptions of good mixed brands Howard st. The demand is not active. The receipt price is 4.25.

Sales of City Mills and Susquehanna at $4.50, but some holders of the former refuse to sell at that rate.

Grain—On Saturday a lot of prime Pen. wheat sold at 97c. and another parcel at 98. A small lot Pa. white for family flour, was sold at 112cts. The receipts of Md wheat are too limited to be noticed. The last sale of yellow Corn was 44c.; none at market.

Tobacco—No change to note in the tobacco market during the week; sale of about 300 hds have been made atprices ranging from $2 to 9. The receipts considered good, and the dem'd for all prime sorts very active, while the com. and infe. kinds go off slowly. We continue former quotations, without change. Ohio, the better qualities sell readily at former quotations. The inspections are 1806 hhds. viz. 1412 Md. 357 Ohio, 29 Mo. and 8 Pa.

Wool—Sales of 2 to 3000 lbs. washed native, in small lots, at 33 cts. cash. The demand is active now at 33a34c for same quality. 3000 lbs unwashed, quarter to com. in good order at 20a22c; and 1200lbs. washed com. to half blood at 32c.; 500 lbs skin washed, 28c. and 500 do 30a31c.

THE BOMMER MANURE METHOD.

We wish to afford every facility to the introduction of this method, as the better it is known the higher it will be esteemed. If farmers who are living in a neigborhood will club together, we will offer them the following inducements to purchase, viz. To any club of Five ordering the method to one address, we will make a deduction of 15 per cent. To a Club of Ten, 20 per cent. reduction, and to larger clubs, a still larger discount upon our established rates for single methods, which are as follows:

For a garden up to 20 acres,	$6
" 100 acres arable land,	10
" 200 " "	15
" 300 " "	18
" 400 " "	20
Unlimited number of acres,	25

☞Purchasers of a smaller right can at any time increase it by paying the difference in price. ABBETT & CO.
Southern proprietors of the Patent Right,
at Parsons & Preston's Book Store, adjoining the Rail Road Depot
mh 13 tf in Pratt street, Baltimore.

☞Those who find it more convenient, can leave their orders with S. Sands, at the office of the *American Farmer*, who will promptly attend thereto. mh 15

B. WOODCOCK'S IMPROVED SELF-SHARPENING PATENT PLOUGH.

Manufactured at Black Rock, Baltimore Co. Md.

The subscriber continues to manufacture three sizes of the above plough, and has made arrangements by which he will be able to keep a supply of them, *both right and left*, constantly on hand, WHOLESALE AND RETAIL.

This plough has proved itself superior to all ploughs with which it has been used or compared. (*See Certificates.*)

In the construction of the above plough the Patentee believes that he has obviated every objection made to the Crane, Hornet, Bull, Crockett, Franklin, Peacock, Patent Lever, and all other ploughs now in use. It is remarkably strong, and will be warranted as follows: For every Mould Board that may break in six months, by fair ploughing, with two of the strongest horses in the country, a new one will be given, free of charge, if the old one be returned to us, carelessness and accidents excepted. It possesses the following advantages:

1st. Individuals who have used it say the draught is about one third less than other ploughs, two horses doing the work of three.

2d. It is constructed so as to turn a furrow against a moderate hill equally as well as on level ground or down hill, and competent judges say it is superior to any of the above, or any they have used, as it performs with more ease to man and horse, and makes better work in all kinds of ground. It turns the furrow round on the top and hollow below, thus leaving the ploughed surface more exposed to the action of the harrow than other ploughs, and gives the vegetable matter a better chance to decompose than if turned flat or irregular, as most other ploughs leave it. One half the harrowing has been dispensed with, which the ground would have required had other ploughs been used.

3. It is comparatively free from choking or carrying dirt, and is said to make the ground more productive than others, in support of which more than 500 can testify.

4th. It admits of three kinds of points and two kinds of shares, [but one point and one share being used on it at the same time,] of which the following is a description: First, the metal point, (Fig. 1,) can be turned upside down when the under side wears round, at which time other points become useless, and thus repeated until worn out. The second (Fig. 2) is a renewable point, made of cast or wrought iron, and is formed to receive a piece of iron or steel on the end secured by a rivet. The third (Fig. 3) is also renewable, and made of wrought or cast iron, with a V formed piece of iron or steel on the end fastened with a rivet. These can be renewed with little expense. The first share (Fig. 4) has two edges, and turns latterally. When the outer edge wears dull, the inner edge may be turned out. The second share [Fig. 5] is self sharpening, with one edge, which, when bevelled below can be turned end for end and thus throw the bevelled side up. One metal point and share, costing 25 cts. each, can plough 40 or 50 acres of good ground, to which fact hundreds can testify.

5th. The cutter [Fig. 5] is made in a triangular form with 3 sharp edges, when the front edge wears dull the under edge may be turned in front, then the third, until worn out. Thus the friction parts of the plough are renewed with little expense, as it is in detached pieces. For further recommendations see the certificates of the best practical farmers.

All orders thankfully received and promptly attended to.

The subscriber tenders his thanks to former friends and solicits a continuance of their patronage. EVAN DAVIS.

Blackrock, May, 1844.

Certificates for Woodcock's patent Self-sharpening Plough.

1,200 PLOUGHS.—We do hereby certify, that we have cast, made and sold between ten and twelve hundred of B. Woodcock's improved patent Plough within three years and six months. MILLER & LIPPINCOTT,
Mt. Pleasant, Westmoreland Co. Pa.

3,000 PLOUGHS.—We do certify that we have cast, made and sold about three thousand of B. Woodcock's patent plough within about four years, being the best plough ever offered in this section of the State.
W. & S. SEIBERT, Chambersburgh, Franklin Co. Pa.

The following persons use the above plough in Franklin and Adams counties, Pa.

In Franklin County—P. Winters, John Armstrong, S. Strickler, John Little, H. Betz, Wm. Slyder, P. Miller, Mr. Ashway, John Kunes, E. Elliott, Michael Grove, D. Kremer, Mr. Shields, I. Besore, John Miller, A. Hoover, John Rodes, B. Rodes, S. Rodes, P. Diller, James Dunlop, J. Purviance, Mr. Bitner, John Lesher, G. Trace, Joseph Wingert, Geo. Wingert, G. Fetterhoof, Mr. Yaugy, George Dull, Wm. Byers, J. B. Cook, Samuel Geeseman, H. George, P. Baker, Jacob Oyster, S. Purviance, Jacob Darr, John Reichard Jr., Joseph Nicely, A. Thompson, H. Wingert, M. Wingert, C. Hetich, Messrs. Smith, Clarke and Solaberger, S. Thompson, J. Orr, Jacob Shirk, Mr. Gallager, John Crider.

In Adams County—Samuel Durbarrow, Joseph Coshun, A. McIlraine, Jacob Keller, Jacob Strealy, F. Deil, Jacob Grass.

2,000 PLOUGHS *in Lancaster Co. Pa.*—Extract of a letter from David Cockley, Lancaster City, Pa.—Dear Sir—In reply to your letter I inform you that there are between 15 and 20 hundred of your self-sharpening plough in use in Lancaster Co. Some farmers have ploughed 2½ acres of sod with two horses and your plough in the same time and ground that they ploughed but 2 acres with 3 horses and the best bar share ploughs. I send you a few names of individuals who use them in this county. D. COCKLEY.

John Kerr, J. Kreider, Abm. Stone, Jacob Landis, Danl. Doner, John Bushong, B. Leaman, B. Swartz, A. Lutz, E. Shirk, Dan Boyer, G. Humme, T. H. Burrows, A. Flynn, R. P. Byers, W. Scott, A. Landis, J. Mohler, W. Cooper, J. Miller, J. A. McClelland, J. Whiteside, P. Eckard, P. Leaman, J. Long, J. Penny, D. Herr, J. Rohner, B. Herr, C. Steinmetz, T. J. Neil, W. W. McCreary, C. Barr, M. Herr, J. B. Burrows, B. Buckwalter, D. Sweney, S. Keller, J. York, W. Hess, B. Heishley, J. Smitney, S. Diller, D. Thayer, S. Graff, G. Lamber, J. Heidelbough, G. Moore, H. Bollinger, D. Houck, P. Reyer, J. Leighman, M. Messer, J. Patterson.

I hereby certify that I have used the Crane and Hornet ploughs. I have also used B. Woodcock's patent plough, and prefer it to the above, so much so that I have this day traded two good Crane ploughs to him for one of his self sharpening ploughs, as it is stronger, runs one third lighter, and is less expensive.
THOMAS B. THOMPSON, near St. Clairsville, Ohio.

The above plough, and points and shares, are kept for sale at Wm. Woodcock's, Pratt st. Baltimore, at Solomon Choat's, Reisterstown, at Joshua Baysmar's, Morgan's run, Carroll county, Daniel Hoover, in Hampstead, at ——, in Manchester, at H. Wilson's, Cockeysville, at ——, Belle Air.

Farmers are referred to Messrs. Luke G. Ensor. Samuel Shaw, Micajah Merryman, Richard Choat, of Baltimore county, and to Dr. St. Clair Street, of Harford county. Orders from the Eastern or Western shore may be addressed to Wm. Woodcock, Baltimore.
May 22 4t

HARVEST TOOLS, &c.

ROBT. SINCLAIR, jr. and CO. No. 6 Light street, offer for sale Grain Cradles, with iron or wood braces, and warranted, Scythes attached, Scythes, Snathes, several sorts: grain, grass and bramble Scythes: horse and hand Rakes: Scythe Stones: composition Scythe Rifles: cradler's Hammers: Sickles, etc. etc.

Thrashing Machines. Now manufacturing a superior lot of Thrashing Machines and Horse Powers, made on the same plan as those of last season, which have given farmers the most perfect satisfaction. In store, corn and tobacco Cultivators, harrows, and ploughs, and agricultural machinery generally. Also, Rice's Patent wheat and corn Fans, price 25 to $30 each. my 29

GUANO.

A fresh supply of Guano, just received and for sale by the bag, containing from 150 to 220 lbs.

POUDRETTE.

A supply now on hand, from the N. York establishment, by the single barrel, or larger quantity. For sale by
SAMUEL SANDS,
May 15 at the office of the American Farmer.

HARVEST TOOLS.

In store and for sale by J S. EASTMAN, Pratt street, near Charles, Wolf's very superior Grain Cradles, (such as I have been selling for the last five years;) Grain and Grass Scythes; steel and wood Hay Forks; an assortment of Hay Rakes, Horse Powers and Threshing Machines, of different patterns, for 2 and 4 horses; Wheat Fans, plain and expanding Corn and Tobacco Cultivators, Corn Planters, my superior Straw Cutters, of all sizes, with wood and iron frames. Also a large assortment of PLOUGHS, of all sizes, and other farming implements.
May 22

GROUND PLASTER.

The subscriber is now engaged in the grinding of Plaster of Paris, for agricultural purposes, and would respectfully inform Farmers and dealers that he is prepared to furnish it of the best quality at the lowest market price, deliverable in any part of the city, or on board Vessels free of expense, application to be made at the Union Plaster Mill, near the Glass House, or at the office No. 6 Bowly's Wharf, corner Wood street. P. S. CHAPPELL, or,
Jan. 3. WM. L. HOPKINS, Agent.

Pulverization. *Decomposition.*

A. G. MOTT,

Corner Ensor and Forest streets, Baltimore, sole agent for the sale of "THE BOSTON CENTRE DRAUGHT PLOUGH," Prouty and Mears' self sharpening patent, with new patent gearing.

By this admirable arrangement, the labors of man and team are lessened one half, while the power and steadiness of draught obtained are so great that any depth of furrow is broken up, pulverized, and carried completely over, with perfect ease and facility, and the precision of the spade.

Prices from 7.50 to 13 dollars, with extra point and share. No extra charge for the new gearing. Castings always on hand.
"Spade labor, the perfection of good husbandry"
ap 17 tf

POUDRETTE

Of the very best quality for sale. Three barrels for $5, or ten barrels for $15—delivered free of cartage by the New York Poudrette Company, 23 Chambers street, New York. Orders by mail, with the cash, will be promptly attended to, and with the same care as though the purchaser was present, if addressed as above to
D. K. MINOR, Agent.

Those wishing to try it this spring had better send their orders immediately, addressed to SAML. SANDS,
ap 9 office of the Farmer, Baltimore st.

MURRAY'S CORN & COB CRUSHERS & GRINDERS.

The subscriber having so simplified the construction of the Machine, and having at the same time added to its efficiency, both for the quantity and quality of its work, is now enabled to sell for $25 Crushers of the capacity of cylinder heretofore sold at 40 dollars—Hand Crushers for 20 dollars—either with or without self-feeders. Any other machines made to order. Also, Repairs of all kinds of agricultural implements. These machines can be seen in operation opposite the Willow Grove Farm of Mr. J. Donnell.
fe 14 WM. MURRAY.

LIME—LIME.

The subscriber is now prepared to furnish from his depot at the City Block, Baltimore, ALUM STONE LIME of the purest description, deliverable at any point on the Chesapeake bay or its tributaries, at such prices as cannot fail to please.

He is also prepared to furnish superior building Lime at 25 cents per bushel, in hhds. or at $1 per bbl.
E. J. COOPER,
aug 30 City Block, Baltimore.

MARTINEAU'S IRON HORSE-POWER IMPROEVD

Made less liable to get out of order, and cheaper to repair, and at less cost than any other machine.

The above cut represents this horse-power, for which the subscriber is proprietor of the patent-right for Maryland, Delaware and the Eastern Shore of Virginia; and he would most respectfully urge upon those wishing to obtain a horse power, to examine this before purchasing elsewhere; for beauty, compactness and durability it has never been surpassed.

Threshing Machines, Wheat Fans. Cultivators, Harrows and the common hand Corn Sheller constantly on hand, and for sale at the lowest prices.

Agricultural Implements of any peculiar model made to order at the shorest notice.

Castings for all kinds of ploughs, constantly on hand by the pound or ton. A liberal discount will be made to country merchants who purchase to sell again.

Mr. Hussey manufactures his reaping machines at this establishment. R. B. CHENOWETH,
corner of Front & Ploughman sts. near Baltimore st. Bridge, or No. 20 Pratt street. Baltimore, mar 31, 1841

PORTABLE TUBULAR STEAM GENERATOR.

The undersigned *successors to the late firm of Bentley, Randall & Co.* are manufacturing, and have constantly on hand a full assortment of the above Boilers, which within the last few months have undergone many improvements: we can now with confidence recommend them for simplicity, strength, durability, economy in fuel, time, labor and room, to surpass any other Steam Generator now in use. They are equally well adapted to the Agriculturist for cooking food for cattle and hogs, the Dyer, Hatter and Tanner for heating liquors, to Manufacturers (both Cotton and Woollen) for heating their mills, boiling sizing, heating cylinders, &c., to Pork Butchers for heating water for scalding hogs and for *rendering lard*, to Tallow Chandlers for melting tallow by circulation of hot water (in a jacket,) to Public Houses and Institutions for cooking, washing and *soap making*, and for many other purposes, for all of which they are now in *successful* operation; the economy in fuel is almost incredible; we guarantee under all circumstances a saving of *two thirds*, and in many instances *fully three fourths*—numerous certificates from the very best of authority can be produced to substantiate the fact. We had the pleasure of receiving the premium for the best Steam Apparatus at the Agricultural Fair held at Govanstown in October 1843.

Manufactory, Mc Causland's old Brewery, Holliday st. near Pleasant st., Baltimore, Md.
Dec. 6. tf RANDALL & CO.

FARMERS! EXAMINE FOR YOURSELVES!

The well selected stock of Implements belonging to JAMES HUEY & CO. No. 7 BOWLY'S WHARF, Baltimore. Our stock consists of a large lot of PLOUGHS, SHEARS, POINTS, and CULTIVATORS, which we will sell low to suit the times—among which rank the economical WILEY, and the MINOR & HORTON PLOUGH of the N. York composition metal and manufacture—the share has a double point and edge, equal to two shares and points. We keep on hand all kinds of PLOUGHS, premium CORN SHELLERS, HAY & STRAW CUTTERS, Corn & Cob CRUSHERS, Horse RAKES, Corn and Tobacco HOES. ☞Farmers and Planters on the Eastern and Western Shores may send their orders with confidence, as they will be attended to with promptitude. We also keep GARDEN & FIELD SEEDS. Thankful for past favors, we hope to merit a continuance of the same. Agents for the above implements,
S. L. STEER, Market st. near the corner of Paca, Baltimore
E. & W. BISHOP, Bel-air market, Baltimore. fe 28

R. SINCLAIR, Jr. & CO.

Agricultural Implement Manufacturers, Nursery & Seedsmen, No. 60 Light street,

Offer for sale a large and superior assortment of GARDEN SEEDS, received by the recent arrivals from Europe, and from their Seed Gardens near this city. Also in store,

FIELD SEEDS, viz. red and white Clover, Trefoil, Lucerne, Ray Grass, Vetches, Herds Grass, Ky. Blue Grass, Orchard Grass, Meadow Oat Grass, Sugar Beet, Mangel Wurtzel, Cow Peas, Beans, Corn, Early Potatoes, &c.

PLOUGHS—The most prominent of which are the DOLPHIN SELF-SHARPENING & WHEEL, of late invention; Winans', Beache's, Pierce's, and Prouty & Co's self-sharpening—Sub-soil, three-furrow, Davis' and Davis' improved—Wiley's and many other valuable sorts. Also,

HARROWS and CULTIVATORS—Of many forms and patterns for cultivating Corn, Tobacco, Cotton, &c. Their stock of

AGRICULTURAL MACHINERY is large and consists principally of the following, viz. Corn Mills, Corn and Cob Crushers and Shellers for manual and horse powers, Threshing Machines, Vegetable Cutters, Churns, Horse Rakes, Lime Spreaders, Sugar Mills, Rollers and Horse Scoops.

GARDEN, FARMING & HARVEST TOOLS—The assortment of these is general, and embraces all the most valuable, new and useful kinds.

BOOKS—Treating on Agriculture, Gardening, management of Stock, Poultry, Bees, &c.

FRUIT & ORNAMENTAL TRESS & PLANTS—supplied from Sinclair & Corse's Nurseries near this city, whose stock of trees and their constant personal attention to this department warrants to purchasers, articles of prime quality and 'true to marks.'

☞Priced Catalogues furnished gratis, containing description of implements, directions for planting trees, management of seeds, &c.
ma 6 ROBT. SINCLAIR, Jr. & CO.

WHITE TURKIES.

A fewpairs of those beautiful White Turkeys, so much admired for lawns on gentlemen's estates, for sale at this office. f 21